

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

Claims 1-18 (Previously Canceled).

19. (Amended) A system for charging a battery coupled to an output of a switching power converter from a charging source having a positive terminal and a negative terminal, the system comprising:

an ac machine having a machine neutral point and a plurality of phase outputs, each of the plurality of phase outputs coupled to one of a plurality of inputs ~~an input~~ of the switching power converter; and

a connecting means for selectively coupling ~~connecting~~ the positive terminal of the charging source to one of:

(1) the machine neutral point; and

(2) one of the plurality of phase outputs of said ac machine.

20. (Original) The system of Claim 19 wherein the negative terminals of the charging source and the battery are connected to system ground.

21. (Original) The system of Claim 19 wherein said charging source has a voltage level which is less than the voltage level of the battery.

22. (New) The system of Claim 19 wherein said connecting means couples the positive terminal of the charging source to the machine neutral point.

23. (New) The system of Claim 19 wherein said connecting means couples the positive terminal of the charging source to and one of the plurality of phase outputs of said ac machine.

24. (New) A system for charging a battery, the system comprising:
- an alternator having a neutral point and a plurality of output terminals;
 - a charging source having a positive terminal and a negative terminal; and
 - a connecting system having a first terminal coupled to the neutral point of said alternator and having a second terminal coupled to said charging source, said connecting system for selectively coupling the positive terminal of said charging source to the neutral point of said alternator.
25. (New) The system of claim 24 further comprising:
- a switched mode rectifier (SMR) circuit coupled to said plurality of output terminals of said alternator;
 - an SMR control circuit coupled to said switched mode rectifier circuit;
 - a jump charging controller coupled to said SMR control circuit; and
 - a speed sensor coupled to said SMR control circuit, said speed sensor adapted to sense at least one of: engine speed and alternator speed and to provide a speed sensor signal to said SMR control circuit wherein in response to the speed sensor signal, said SMR control circuit provides duty signals to control the operation of said SMR.
26. (New) A system for charging a battery having first and second battery terminals, the system comprising:
- an ac machine having a machine neutral point, a machine inductance characteristic and a plurality of output terminals;
 - a switched-mode rectifier (SMR) having a plurality of input terminals coupled to predetermined ones of the plurality of output terminals of said ac machine and having a pair of output terminals coupled to respective ones of the battery terminals of the battery;
 - a charging source having a first terminal coupled to a first reference potential and having a second terminal;
 - connecting means for selectively coupling the second terminal of said charging source to the machine neutral point such that the inductance characteristic of said ac machine in

conjunction with said SMR can be used as a dc/dc converter to charge the battery from said charging source.

27. (New) The system of Claim 26 wherein the first terminal of said charging source corresponds to a negative terminal, the second terminal of said charging source corresponds to a positive terminal and the first reference potential corresponds to ground.

28. (New) The system of Claim 27 wherein the battery has a higher voltage capacity than the charging source.

29. (New) The system of Claim 28 wherein and the negative terminal of said charging source and a negative terminal of the battery are coupled to ground.

30. (New) The system of Claim 26 wherein said means for selectively connecting the first terminal of said charging source to the machine neutral point is provided as one of:

- a connector;
- a switch;
- a mechanical switch;
- a relay; and
- a semiconductor switch.

31. (New) The system of Claim 26 wherein said SMR comprises a plurality of diodes and a plurality of transistors coupled such that when the transistors are biased into a conducting state, current in the ac machine inductances increases, drawing energy from said charging source and storing it in the ac machine inductances and when the transistors are biased into a non-conducting state, a portion of the energy from said charging source plus additional energy from said charging source are transferred to the battery through said diodes of said SMR.

32. (New) The system of Claim 31 wherein the battery corresponds to a high-voltage battery and said charging source corresponds to a low-voltage charging source.

33. (New) The system of Claim 32 wherein the battery and the charging source are disposed in a different vehicles.

34. (New) The system of Claim 33 wherein said means for selectively connecting the neutral of the ac machine to said charging source is provided as a relay connecting the machine neutral to the positive terminal of the low-voltage battery.

35. (New) The system of Claim 32 wherein the battery and the charging source are disposed in a single vehicle.